

Direct Variation Power Model

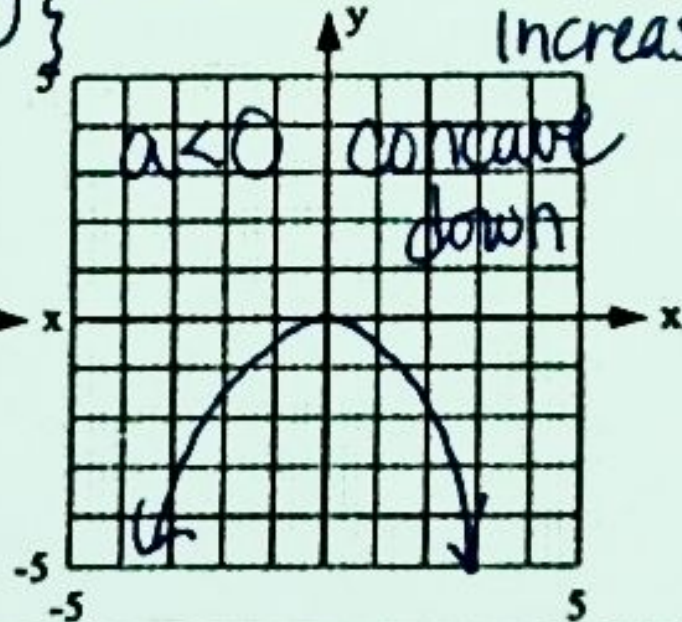
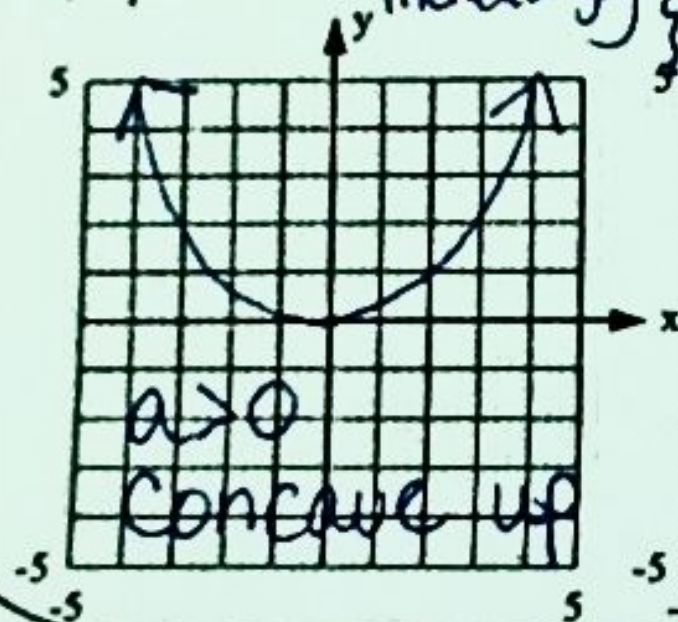
$$y = ax^2$$

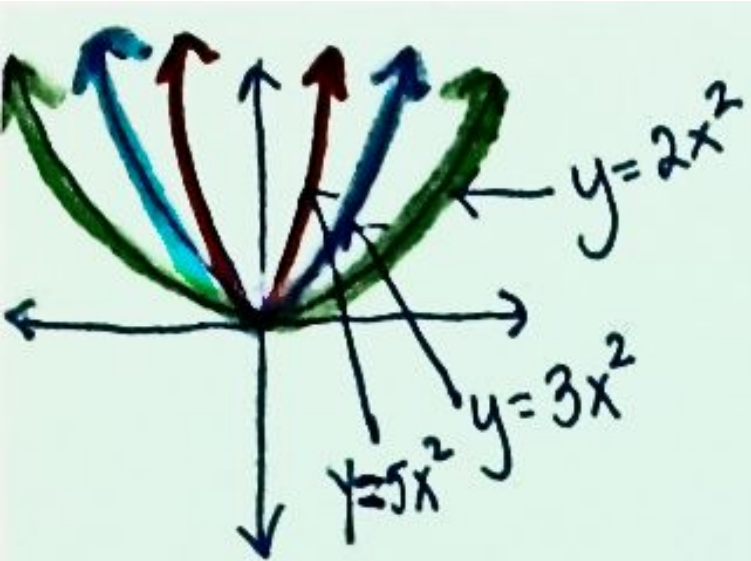
Quadratic Parabola

Words for phrases describing the patterns in the graphs below:

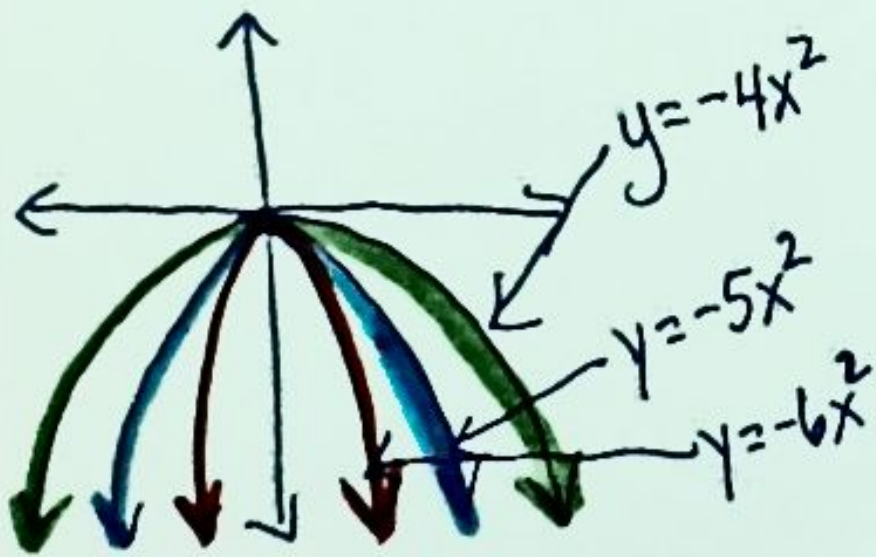
$a > 0$: As x increases
constantly, y decreases
decreasingly until the
minimum then increases
increasingly

$a < 0$: As x increases
constantly, y increases
decreasingly until the
maximum then decreases
decreasingly





As the $|a|$ increases
the parabola gets
Steeper.



Further the a -value
is away from zero
the steeper the
parabola